REMARKS

This Amendment, filed in reply to the Office Action dated May 13, 2005, is believed to be fully responsive to each point of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

Claims 1-49 remain pending in the application. Claims 1-2, 7-8, 13, 15-18, 21, 24, 26-28 and 45-49 have been rejected under 35 U.S.C. § 102 as being anticipated by Liang. Claims 3-6, 9-12, 14, 19-20, 22-23, 25, 29-31, 33-35, 37-39 and 41-43 have been rejected under 35 U.S.C. § 103 as being unpatentable over Liang in view of Keating. Claims 32, 36, 40 and 44 have been rejected under 35 U.S.C. § 103 as being unpatentable over Liang in view of Keating and further in view of Dundas. All the references are previously of record. Applicant respectfully submits the following for responding to the prior art rejections.

To expedite prosecution of this case, Applicant hereinabove cancels claims 13-17 without prejudice or disclaimer. With regard to the remaining rejections, Applicant submits the following arguments in traversal of the prior art rejections.

Applicant's invention relates to a method and apparatus for matching characteristics of a standard print medium used in a color proof to a desired medium used in later printing. In this connection, an exemplary embodiment of the invention converts device dependent data to a first colorimetric data for the standard print medium. Subsequently, the first colorimetric data is converted to second colorimetric data to correct for the difference between the color of the standard print medium and the desired print medium. As a further preferred feature, the first and second colorimetric data sets comprise device-independent data.

Turning to the cited art, Liang relates to an apparatus to match the color outputs in different devices, such as monitors or printers. Referring to Fig. 6, a printer 112 will output color data using YMCK while a printer 114 will output visually matched results using Y'M'C'K' color data. The adaptor 122, which includes an LUT 128, will adjust the input YMCK data to provide the color matching Y'M'C'K' data. Figs. 7 and 8 illustrate how the LUT table 128 is constructed. In particular, YMCK data are output to the two printers 112, 114 to print color charts 132, 124 where the color is detected by a colorimeter 36 to provide LUT's correlating YMCK inputs and Lab outputs for each printer 112, 114 and which are used to construct the models 140, 142 for the adaptor 122 (Fig. 6). Fig. 8 illustrates how the LUT 128 is constructed to convert YMCK to Y'M'C'K' between printers. In Fig. 8, model 140 produces data Labn which is compared to that output by the model 142 L'a'b'n. Based on the difference, the initial YMCK data is adjusted by ΔY, ΔM, ΔC, ΔK until there is an acceptable difference output between the out of models 140 and 142. Once this difference is satisfied, the values YMCK and corresponding Y'M'C'K' are provided to the LUT.

The Examiner contends that Liang teaches or suggests each feature of independent claim 1. Applicant submits that the rejection is not supported for at least the following reasons.

The Examiner relies on various disclosures at cols. 10-11 of Liang to teach features of claim 1, jumping from one section of the column to another in a disjointed manner that disregards the disclosed operation of the Liang device. A basic incorrect assumption made by the Examiner is that Figs. 6-8 all represent the same apparatus. See detailed action at page 6. To the extent that Figs. 6-8 are related, they do not represent the same apparatus as the Examiner contends, which reveals the defects in the rejection as follows.

The Examiner cites col. 11, lines 4-9 and lines 27-28 for teaching conversion of device-dependent data to first colorimetric data. However, lines 4-9 (Fig. 7) relate to colorimetric measurement of color patches (YMCK to Lab) to form data for models 140 and 142, and lines 27-28 (Fig. 8) relate to conversion of the YMCK to an Lab space in model 140 for comparison with the output of the model 142 to generate LUT 128. Assuming that the Examiner is referring to either one of these distinct conversions to correspond to the output of first colorimetric data, it is noted that the output in either case is Lab data. However, the Examiner then subsequently takes an inconsistent position by shifting the designation of first colorimetric data (Lab) in Liang to CMYK data.

In particular, claim 1 describes color correcting of the first colorimetric data to second colorimetric data. At page 6, last partial paragraph of the detailed action, the Examiner cites the adaptor (Fig. 6, element 122) as the color corrector device. However, the corrector 122 receives as input YMCK data, not the Lab data previously cited as the first colorimetric data.

In the Response to Arguments (detailed action at page 3, first and second full paragraphs), the Examiner relies on the colorimeter outputs again (col. 11, lines 4-9) to teach converting a first colorimetric data to second colorimetric data. In this regard, the rejection includes two fatal errors, including 1) the double counting of the discussion at col. 11, lines 4-9 to be the first conversion step and also the subsequent color correcting step; and 2) incorrectly reciting the claim language which refers to conversion of the first colorimetric data (Lab) to second colorimetric data, and not just a general color conversion (YMCK to Lab).

The Examiner contends that Fig. 8 corresponds to a detail of Fig. 6. Detailed action at page 6, last partial paragraph. This is not accurate. Fig. 8 shows how an LUT 128 becomes

generated which uses preselected data sets, and is essentially a calibration operation to calculate 128. By contrast, Fig. 6 illustrates a printing operation, which actually receives image data for output as pixel data to the printers. No aspect of Liang teaches the conversion and color correction as claimed.

Additionally, claim 1 describes output of a proof where the difference between color of the desired medium and print medium are compensated using the second colorimetric data. The Examiner cites Fig. 7, element 134 to teach this proof. However, element 134 is a color chart for initial determination of YMCK data to Lab data and thus is not a proof and is also not based on the second colorimetric data as claimed. Accordingly, there are clear errors in the Examiner's rejection such that withdrawal of the rejection is warranted.

Because apparatus claim 7 includes analogous but not necessarily coextensive features as claim 1, claim 7 is also patentable for all the reasons set forth above for independent claim 1. Claims 2, 8, 18, 21 are patentable for analogous reasons. Claims 3-6, 9-12, 19-20, 22-23, 29-48 are patentable based on their dependency.

With further regard to claim 18, this claim describes color correction based on ratios. The Examiner engages in speculation regarding the correction ratios of Lab compensation. Such speculation does not support a rejection since alternative ways of color correction, such as compensation in additive ΔY, ΔM, ΔC, ΔK values (Liang, col. 11, lines 36-58) can be used to compensate for discrepancy. The Examiner is not free to assume that the additive correction in Liang would structurally be the same as the techniques to implement the transfer function as claimed since several alternative arrangements of adders, multipliers, etc. can be used to implement Liang that are not structurally the same. Therefore, Applicant submits that the

Examiner's implicit reliance on an inherent disclosure for the features of claim 18 is not warranted. Claims 21 and 24 are patentable for similar reasons though not necessarily coextensive in scope. Claims 25-28 pare patentable based on their dependency.

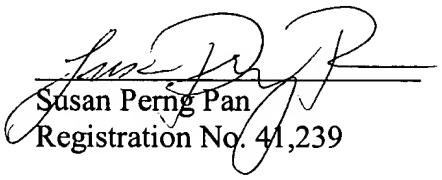
With further regard to claims 45-48, these claims describe that the first and second colorimetric data are device-independent. The Examiner cites Fig. 8, elements 164 and 168 as corresponding to these features, merging the characteristics of Fig. 6, printer 1 and operations of the LUT generator in Fig. 8. This is incorrect since Figs. 6 and 8 do not comprise the same apparatus as discussed above. Moreover, the printer conversions are done in YMCK to Y'M'C'K' (Fig. 6, element 122) and not Lab as the Examiner contends. Therefore, claims 44-48 are patentable for these additional reasons. Claim 49 is patentable for analogous reasons.

Because none of the secondary references of Dundas and Keating make up for the above deficiencies of Liang, Applicant submits that all the prior art rejections should be withdrawn.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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